

CLAIMS:

1. A polytetrafluoroethylene (PTFE) material comprising:
aggregations of nodes; and
fibrils interconnecting the aggregations.
2. The material of claim 1 wherein the nodes are interconnected by fibrils to
form the aggregations.
3. The material of claim 2 wherein the fibrils interconnecting the aggregations
are longer than the fibrils interconnecting the nodes.
- 16 4. The material of claim 1 wherein the fibrils interconnecting the aggregations
have average lengths of about 100 to 1000 microns.
- 5 5. The material of claim 2 wherein the fibrils interconnecting the aggregations
have average lengths of about 100 to 1000 microns.
- 6 6. The material of claim 3 wherein the fibrils interconnecting the aggregations
have average lengths of about 100 to 1000 microns.
- 13 7. The material of claim 1 wherein the fibrils interconnecting the aggregations
have average lengths of about 500 to 1000 microns.
- 5 8. The material of claim 2 wherein the fibrils interconnecting the aggregations
have average lengths of about 500 to 1000 microns.
- 11 9. The material of claim 3 wherein the fibrils interconnecting the aggregations
have average lengths of about 500 to 1000 microns.

6 ~~10~~. The material of claim 2 wherein the fibrils connecting the nodes have average lengths of about 10 to 30 microns.

13 ~~11~~. The material of claim 3 wherein the fibrils connecting the nodes have average lengths of about 10 to 30 microns.

10 ~~12~~. The material of claim 6 wherein the fibrils connecting the nodes have average lengths of about 10 to 30 microns.

12 ~~13~~. The material of claim 9 wherein the fibrils connecting the nodes have average lengths of about 10 to 30 microns.

15 ~~14~~. The composite article as recited in claim 1, wherein the aggregations have densities of less than about 2.0 grams per cubic centimeter.

7 ~~15~~. The composite article as recited in claim 2, wherein the aggregations have densities of less than about 2.0 grams per cubic centimeter.

16 ~~16~~. The composite article as recited in claim 3, wherein the aggregations have densities of less than about 2.0 grams per cubic centimeter.

19 ~~17~~. The composite article as recited in claim 1, wherein the nodes have densities of about 2.0 to 2.2 grams per cubic centimeter.

8 ~~18~~. The composite article as recited in claim 2, wherein the nodes have densities of about 2.0 to 2.2 grams per cubic centimeter.

15 ~~19~~. The composite article as recited in claim 3, wherein the nodes have densities of about 2.0 to 2.2 grams per cubic centimeter.

20. A polytetrafluoroethylene (PTFE) material comprising:
aggregations of nodes;
short fibrils interconnecting the nodes to form the aggregations; and
long fibrils interconnecting the aggregations.

21. The material of claim 20 wherein the long fibrils have average lengths of about 100 to 1000 microns.

22. The material of claim 20 wherein the long fibrils have average lengths of about 500 to 1000 microns.

23. The material of claim 20 wherein the short fibrils have average lengths of about 10 to 30 microns.

24. The composite article as recited in claim 20, wherein the aggregations have densities of less than about 2.0 grams per cubic centimeter.

25. The composite article as recited in claim 20, wherein the nodes have densities of about 2.0 to 2.2 grams per cubic centimeter.

26. A polytetrafluoroethylene (PTFE) material comprising:
aggregations of nodes, the nodes being interconnected by fibrils having average lengths of about 10 to 30 microns;
long fibrils having average lengths of about 500 to 1000 microns interconnecting the aggregations;
the aggregations having densities of about 2.0 to 2.2 grams per cubic centimeter; and
the nodes having average densities of less than about 2.0 grams per cubic centimeter.